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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LEWIS, DAVID LEE	

ART UNIT	PAPER NUMBER
2673	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/263,374	SLEATOR, MICHAEL	
	Examiner	Art Unit	
	David L Lewis	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-9,22-30,37-49 and 51-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5-9, 22-30, 37-49, and 51-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-3, 5-9, 22-30, 37-49, and 51-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umeda et al. (6014129) in view of Kaplan (5280275).

2. **As in claim 1, Umeda et al. teaches of** a display system that comprises a display screen, **figure 1 item 1**, a processor for controlling use of the display screen to display information, **column 11 lines 35-40**, and a hand held remote control device for communicating user input to the processor, **figure 1 item 3**, a method of positioning a cursor on the display screen, **column 2 lines 47-60**, the method comprising: emitting a signal from a first location to a remote control device at a second location, wherein the signal has an incident direction at the second location, **figure 1 item 2, column 10 lines 30-40**; receiving from the remote control device, data corresponding to an angular displacement between the incident direction of the emitted signal and at least one selected axis of the remote control device, **figure 2 item 5, figure 1 item 3, column 11 lines 1-35, column 12 lines 25-40,** and positioning the cursor on the display screen in response to the mapped data, **column 11 lines 35-48,** corresponding to angular displacement of the remote control device into movement of the cursor, **column 2 lines 52-55, column 11 lines 28-34 and 58-67**; **However Umeda does not explicitly teach of** using one or more mapping functions or rules to map the received data wherein said mapping is dynamically modified based on (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is

directed. While Umeda fails to explicitly teach this feature, it is implied based on what Umeda does teach. Namely, Umeda teaches of a computer display screen cursor control from a remote input device that functions like the well known mouse input device, **column 1 lines 42-48**, that can match a cursor with a button appearing at an optional position on a screen, column 17 lines 45-55. As known in the art mouse devices are used to interface graphically with computer display screen to perform functions assigned to menu displays or smart buttons, which are associated with specific regions of a display, and map to specific tasks and functions. **Kaplan teaches of** using one or more mapping functions or rules to map the received data in accordance with either (i) a particular task a user is performing, **figure 2, column 3 lines 1-15 and 37-53**, or (ii) a particular region of the display screen to which user input is directed, figure 2, column 3 lines 1-15 and 37-53; and generating the selected user input function on the display screen in response to the mapped data, figure 2, column 3 lines 1-15 and 37-53. **Wherein it would have been obvious to the skilled artisan** at the time of the invention to include the mapping functions feature as taught by Kaplan in the remote controlled input device as taught by Umeda because Umeda teaches of an input device designed to function like the well known mouse device, whos features include mapping functions as known in the art and suggested by Kaplan, as found in claim 1. When the apparatus 3 is manually inclined it detects the inclination angle having a first and second components, column 11 lines 28-67. Wherein a feeling of togetherness in relationship between the actual inclination quantities and the movement quantity of the cursor on the screen is provided. Umeda teaches of transmitting the calculated inclination data from the input apparatus to the main frame of the apparatus or calculating said inclination data in the main frame. Sensors are provided for obtaining both inclination and rotation angles of the input device for the purpose of commanding a cursor on a screen. Kaplan adds to Umeda by teaching conventional cursor mapping means whereby cursor position is mapped with cursor smart functions.

3. **As in claim 22, Umeda et al. teaches of** a moveable remote control device, **figure 1 item 3**, for use in a display system that includes a display screen and a

processor electronically connected to the display screen, **figure 1 item 1, column 11 lines 35-48**, the moveable remote control device transmitting to the processor angular orientation information of the moveable remote control device so that a selected user input function may be generated on the display screen, **column 11 lines 35-48**, the remote control device comprising: receiving means for receiving an electromagnetic signal emitted from a remote location, **figure 2 item 5**; orientation means for establishing an initial angular orientation of the remote control device, data corresponding to the initial angular orientation being transmitted from the remote control device to the processor, **column 12 lines 58-67, column 13 lines 7-25**; first means for measuring a first component of an angular displacement of the remote control device about a first axis and relative to the initial angular orientation, **figure 5A**; second means for measuring a second component of the angular displacement of the remote control device about a second axis and with respect to the initial angular orientation, the second axis being non-parallel with the first axis, **figure 5B**; and transmitting means for sending the cursor positioning to the processor, **column 11 lines 35-48,** corresponding to first and second components of angular displacement of the remote control device as movement of the cursor, **column 2 lines 52-55, column 11 lines 28-34 and 58-67. However Umeda does not explicitly teach of** mapping means for mapping corresponding to the first compenont and the second component of the angular displacement into at least cursor positioning data based on either (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed. While Umeda fails to explicitly teach this feature, it is implied based on what Umeda does teach. Namely, Umeda teaches of a computer display screen cursor control from a remote input device that functions like the well known mouse input device, **column 1 lines 42-48**, that can match a cursor with a button appearing at an optional position on a screen, column 17 lines 45-55. As known in the art mouse devices are used to interface graphically with computer display screen to perform functions assigned to menu displays or smart buttons, which are associated with specific regions of a display, and map to specific tasks and functions. **Kaplan teaches of** using one or more mapping functions or rules to map the received data in

accordance with either (i) a particular task a user is performing, **figure 2, column 3 lines 1-15 and 37-53**, or (ii) a particular region of the display screen to which user input is directed, figure 2, column 3 lines 1-15 and 37-53; and generating the selected user input function on the display screen in response to the mapped data, figure 2, column 3 lines 1-15 and 37-53. **Wherein it would have been obvious to the skilled artisan** at the time of the invention to include the mapping functions feature as taught by Kaplan in the remote controlled input device as taught by Umeda because Umeda teaches of an input device designed to function like the well known mouse device, whos features include mapping functions as known in the art and suggested by Kaplan, as found in claim 22. When the apparatus 3 is manually inclined it detects the inclination angle having a first and second components, column 11 lines 28-67. Wherein a feeling of togetherness in relationship between the actual inclination quantities and the movement quantity of the cursor on the screen is provided. Umeda teaches of transmitting the calculated inclination data from the input apparatus to the main frame of the apparatus or calculating said inclination data in the main frame. Sensors are provided for obtaining both inclination and rotation angles of the input device for the purpose of commanding a cursor on a screen. Kaplan adds to Umeda by teaching conventional cursor mapping means whereby cursor position is mapped with cursor smart functions.

4. **As in claim 48, Umeda et al. teaches of** a computer input system for generating a selected user input function on a display screen based on user interaction with a remote control device, **column 1 lines 42-48, column 2 lines 47-55**, the computer input system comprising: emitter means for emitting a signal from a first location to a remote control device at a second location, wherein the signal has an incident direction at the second location, **figure 1 item 2, column 10 lines 25-33**; receiver means for receiving from the remote control device, data corresponding to an angular displacement between the incident direction of the emitted signal and at least one selected axis of the remote control device, **figure 1 item 3**; and processor means for generating the selected user input function on the display screen, **column 11 lines 35-48, corresponding to angular displacement data, column 2 lines 52-55, column 11**

lines 28-34 and 58-67. **However Umeda does not explicitly teach** of said mapping means for mapping the received data corresponding to angular displacement into cursor positioning data based on either (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed. While Umeda fails to explicitly teach this feature, it is implied based on what Umeda does teach. Namely, Umeda teaches of a computer display screen cursor control from a remote input device that functions like the well known mouse input device, **column 1 lines 42-48**, that can match a cursor with a button appearing at an optional position on a screen, column 17 lines 45-55. As known in the art mouse devices are used to interface graphically with computer display screen to perform functions assigned to menu displays or smart buttons, which are associated with specific regions of a display, and map to specific tasks and functions. **Kaplan teaches of** using one or more mapping functions or rules to map the received data in accordance with either (i) a particular task a user is performing, **figure 2, column 3 lines 1-15 and 37-53**, or (ii) a particular region of the display screen to which user input is directed, figure 2, column 3 lines 1-15 and 37-53; and generating the selected user input function on the display screen in response to the mapped data, figure 2, column 3 lines 1-15 and 37-53. **Wherein it would have been obvious to the skilled artisan** at the time of the invention to include the mapping functions feature as taught by Kaplan in the remote controlled input device as taught by Umeda because Umeda teaches of an input device designed to function like the well known mouse device, whos features include mapping functions as known in the art and suggested by Kaplan, as found in claim 48. When the apparatus 3 is manually inclined it detects the inclination angle having a first and second components, column 11 lines 28-67. Wherein a feeling of togetherness in relationship between the actual inclination quantities and the movement quantity of the cursor on the screen is provided. Umeda teaches of transmitting the calculated inclination data from the input apparatus to the main frame of the apparatus or calculating said inclination data in the main frame. Sensors are provided for obtaining both inclination and rotation angles of the input device for the purpose of commanding a cursor on a screen. Kaplan adds to Umeda by

teaching conventional cursor mapping means whereby cursor position is mapped with cursor smart functions.

5. **As in claim 56, Umeda et al. teaches of** a computer input system for generating a selected user input function on a display screen based on user interaction with a remote control device, **column 1 lines 42-48, column 2 lines 47-55,** the computer input system comprising: an emitter that emits a signal from a first location to a remote control device at a second location, wherein the signal has an incident direction at the second location, **figure 1 item 2, column 10 lines 25-33**; a receiver that detects data transmitted by the remote control device, wherein the received data corresponds to an angular displacement between the incident direction of the signal and at least one selected axis of the remote control device, **figure 1 item 3**; and a processor that generates the selected user input function on the display screen, **column 11 lines 35-48, column 11 lines 35-48,** corresponding to angular displacement data, **column 2 lines 52-55, column 11 lines 28-34 and 58-67. However Umeda does not explicitly teach of** a mapping module that comprises one or more mapping functions or rules dynamically selected and applied to the received angular displacement data when translating the received angular displacement data into cursor positioning data, based on (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed. While Umeda fails to explicitly teach this feature, it is implied based on what Umeda does teach. Namely, Umeda teaches of a computer display screen cursor control from a remote input device that functions like the well known mouse input device, **column 1 lines 42-48**, that can match a cursor with a button appearing at an optional position on a screen, column 17 lines 45-55. As known in the art mouse devices are used to interface graphically with computer display screen to perform functions assigned to menu displays or smart buttons, which are associated with specific regions of a display, and map to specific tasks and functions. **Kaplan teaches of** using one or more mapping functions or rules to map the received data in accordance with either (i) a particular task a user is performing, **figure 2, column 3 lines 1-15 and 37-53**, or (ii) a particular region of the display screen to which user input

is directed, figure 2, column 3 lines 1-15 and 37-53; and generating the selected user input function on the display screen in response to the mapped data, figure 2, column 3 lines 1-15 and 37-53. **Wherein it would have been obvious to the skilled artisan** at the time of the invention to include the mapping functions feature as taught by Kaplan in the remote controlled input device as taught by Umeda because Umeda teaches of an input device designed to function like the well known mouse device, whos features include mapping functions as known in the art and suggested by Kaplan, as found in claim 56. When the apparatus 3 is manually inclined it detects the inclination angle having a first and second components, column 11 lines 28-67. Wherein a feeling of togetherness in relationship between the actual inclination quantities and the movement quantity of the cursor on the screen is provided. Umeda teaches of transmitting the calculated inclination data from the input apparatus to the main frame of the apparatus or calculating said inclination data in the main frame. Sensors are provided for obtaining both inclination and rotation angles of the input device for the purpose of commanding a cursor on a screen. Kaplan adds to Umeda by teaching conventional cursor mapping means whereby cursor position is mapped with cursor smart functions.

6. **As in claim 2**, Umeda in view of Kaplan teaches of said moving the input device to establish a new displacement and transmitting new data, column 2 lines 47-67, column 3 lines 31-44, column 11 lines 35-48, and generating an input function based on new mapped data, column 1 lines 42-47, column 2 lines 47-67, wherein operation signals are also transmitted to perform button functions, as shown by Kaplan, column 3 lines 35-55. **As in claim 3**, Umeda teaches of further comprising filtering the transmitted data to at least partially prevent the selected user input function from being generated on the display screen in response to unintentional movement of the remote control device, column 10 lines 30-40, column 18 lines 10-25, wherein said unintentional movement magnitude being less than a preselected threshold value, is inherent to current detection and the removal of the carrier signal. **As in claim 5-7**, Umeda teaches of wherein generating the selected user input function on the display screen comprises positioning a cursor on the display screen, column 11 lines 35-47, and

wherein the cursor moves on the display screen in response to changes in the detected angular displacement, column 11 lines 35-67, column 17 lines 55-67. Wherein the first 5A/B and second 5C/D components affect a changing ratio of the actual inclination quantities, column 11 lines 59-67. **As in claims 8 and 9**, Umeda teaches of wherein receiving the signal with the remote control device comprises projecting the signal through at least one lens, figure 4 item 12a and 11a, column 12 lines 19-26. **As in claims 37**, Umeda teaches of further comprising the remote control device: receiving the emitted signal, column 17 lines 54-67; detecting an angular displacement between the incident direction of the signal and the at least one selected axis of the remote control device, column 17 lines 54-67; and transmitting the data corresponding to the angular displacement, column 11 lines 35-48, column 17 lines 54-67. **As in claim 38**, Umeda teaches of wherein the filtering is part of a mapping function, column 15 lines 55-67. **As in claim 39**, Umeda teaches of wherein selecting a scale factor is part of a mapping function, column 11 lines 59-67. **As in claim 40**, Umeda teaches of wherein positioning the cursor on the display screen is independent of the angular position of the remote control device about its central axis, column 28 lines 47-59. **As in claim 41**, Umeda teaches of wherein emitting the signal comprises at least one of modulating the signal and encoding data into the signal, column 18 lines 30-40. **As in claim 42**, Umeda teaches of wherein the signal is emitted from the first location to a plurality of remote control devices, **column 27 lines 30-36**, the method further comprising: receiving from each of the plurality of remote control devices, **column 27 lines 30-36**, data corresponding to the angular displacement between the incident direction of the emitted signal said at least one selected axis of each remote control device, column 17 lines 53-67; and generating one or more user input functions on the display screen in response to the data received from each of the plurality of remote control devices, column 16 lines 12-20. **As in claim 43**, Umeda teaches of further comprising means for decoding instructions that are encoded in the electromagnetic signal, column 17 lines 56-67, column 18 lines 24-30. **As in claim 44**, Umeda teaches of wherein the means for decoding instructions comprises a summing amplifier and a demodulator, column 11 lines 49-58, column 15 lines 55-67, column 18 lines 7-30, column 20 lines 30-41. **As in**

claim 45, Umeda teaches of further comprising processor means for executing decoded instructions, column 18 lines 24-30. **As in claim 46**, Umeda teaches of further comprising means for setting the remote control to an active state, column 10 lines 27-38. .**As in claim 47**, Umeda teaches of further comprising normalization means to compensate for changes in the apparent intensity of the signal, column 28 lines 1-18.

7. **As in claims 49 and 57**, Umeda teaches of a computer input system as defined in claim 48, comprising: means for storing data relating to a reference angular displacement of the remote control device, column 16 lines 46-55, and means for comparing the reference angular displacement to the received angular displacement data, column 18 lines 7-30, column 20 lines 20-41, whereby an angular movement of the remote control device is determined, column 18 lines 7-30, column 20 lines 20-41. **As in claim 58**, Umeda teaches of a computer input system as defined in claim 49, wherein the selected user input function comprises a cursor positioning function, column 2 lines 47-55, and wherein a cursor position on the display screen is determined by the angular movement of the remote control device, column 11 lines 35-47, column 28 lines 47-58. **As in claims 51 and 59**, Umeda teaches of a computer input system as defined in claim 50, wherein the mapping means includes means for applying a scale factor to the received data such that movement of the cursor is selectively proportional to a unit change of the angular displacement, column 11 lines 59-67. **As in claims 52 and 60**, Umeda teaches of a computer input system as defined in claim 48, further comprising means for filtering the transmitted data to at least partially prevent the selected user input function from being generated on the display screen in response to unintentional movement of the remote control device, column 10 lines 30-40, column 15 lines 55-60, column 18 lines 10-25. **As in claim 53**, Umeda teaches of a computer input system as defined in claim 52, wherein the means for filtering is within the mapping means, column 1 lines 43-48, column 15 lines 55-60, column 18 lines 24-30. **As in claim 54 and 61**, Umeda teaches of a computer input system as defined in claim 52, wherein the means for filtering performs at least one of temporal, figure 26 item 136, column 20 lines 20-42, and spatial filtering, figure 4 item 11. **As in claims 55 and 62**, Umeda teaches of

wherein the computer input system includes one or more remote control devices, **figure 1 item 3**, and wherein each individual remote control device comprises: receiver means for receiving the emitted signal, **column 17 lines 54-67**; orientation means for establishing an initial angular orientation of the individual remote control device, **column 17 lines 54-67**; first means for repeatedly detecting a variable first component of the angular displacement of the individual remote control device relative to the initial angular orientation by detecting the incident direction of the emitted signal, wherein the first component of the angular displacement is measured about a first axis, **figure 5A**; second means for repeatedly detecting a variable second component of the angular displacement of the individual remote control device by detecting the incident direction of the emitted signal, wherein the second component is measured about a second axis that is non-parallel with the first axis, **figure 5B**; and transmitting means for sending data corresponding to the first component and the second component of the angular displacement, **column 11 lines 35-48, column 17 lines 54-67**.

Response to Arguments

8. Applicant's arguments filed on 2/23/2005 with respect to claims 1-3, 5-9, 22-30, 37-49, and 51-62 have been considered but are not persuasive. The claims have been rejected over Umeda et al. in view of Kaplan. Kaplan teaches of the known mapping feature implied by Umeda et al. When the apparatus 3 is manually inclined it detects the inclination angle having a first and second components, column 11 lines 28-67. Wherein a feeling of togetherness in relationship between the actual inclination quantities and the movement quantity of the cursor on the screen is provided. Umeda teaches of transmitting the calculated inclination data from the input apparatus to the main frame of the apparatus or calculating said inclination data in the main frame. Sensors are provided for obtaining both inclination and rotation angles of the input device for the purpose of commanding a cursor on a screen. Kaplan adds to Umeda by teaching conventional cursor mapping means whereby cursor position is mapped with

cursor smart functions. Given Umeda teaches of cursor control as an input means, said conventional cursor mapping means as taught by Kaplan will obviously be available to the device of Umeda as is known in the art. Upon further consideration the applicants amended claims language failed to distinguish over the prior art of record. Rejection Maintained.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(703) 306-3026**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231
or faxed to:
(703) 872-9314 (for Technology Center 2600 only)
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

March 6, 2005

BIPIN SHALWALA
SUPV PATENT EXAMINER
TECH CENTER 2600